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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,010	03/15/2004	Minoru Kuniyoshi	038788.53357US	6813
23911 7590 05/02/2007 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER DEGHAN, QUEENIE S	
			ART UNIT 1731	PAPER NUMBER
			MAIL DATE 05/02/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/800,010	KUNIYOSHI ET AL.	
	Examiner	Art Unit	
	Queenie Dehghan	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 6-26, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) 6-22, 28 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe et al. (2003/0005723) in view of Etienne (WO 02057810 as represented by 7,006,745). Kawabe et al. teach a process for manufacturing an organic inorganic hybrid glassy material comprising producing a gel body by the sol-gel method ([0037], [0043], [0062]) comprising a metal unit and a phenyl group ([0039], [0042]), a sintering step at 200-400°C, wherein the sintering step is interpreted to include melting. However,

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Kawabe et al. fail to disclose an aging step at a temperature between 30-400°C.

Etienne teaches a method for manufacturing organic inorganic hybrid layers comprising mixing and reacting sol gel precursors (col. 2 lines 9-15). Etienne also teaches a heat treatment step hybrid material is stabilized by heat treatment at a temperature between 100-200°C for at least 5 minutes, wherein this stabilization is interpreted to be an aging step. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the aging step of Etienne in the process of Kawabe et al. in order to provide for an organic inorganic hybrid glassy material that is sufficiently crosslinked.

2. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe et al. (2003/0005723) in view of Etienne (WO 02057810 as represented by 7,006,745), Kuriyama (English Abstract of JP 07-126035), Yamada (English Abstract JP 02-137737), and Niida et al. (Journal of Non-Crystalline Solids 306 (2002) 292-299).

Kawabe et al. teach a process for manufacturing an organic inorganic hybrid glassy material comprising producing a gel body by the sol-gel method ([0037], [0043], [0062]) comprising a phenyl group ([0042]), a sintering step at 200-400°C, wherein the sintering step is interpreted to include melting. However, Kawabe et al. fail to disclose an aging step at a temperature between 30-400°C. Etienne teaches a method for manufacturing organic inorganic hybrid layers comprising mixing and reacting sol gel precursors (col. 2 lines 9-15). Etienne also teaches a heat treatment step hybrid material is stabilized by heat treatment at a temperature between 100-200°C for at least 5 minutes, wherein this stabilization is interpreted to be an aging step. It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to utilize the aging step of Etienne in the process of Kawabe et al. in order to provide for an organic inorganic hybrid glassy material that is sufficiently crosslinked.

3. Although Kawabe et al. mention one of many known ways to form precursor materials for making glass, Kawabe et al. fail to disclose other methods for making precursor substances or the mixing of various substance for the making of glass.

Yamada also teach a method utilizing sol-gel for making a glass precursor material comprising methytriethoxysilane (abstract). Niida et al. teach a precursor substance for low melting glass, obtained by a non- aqueous acid-base reaction method comprising  $\text{Me}_2\text{SiO}$ ,  $\text{P}_2\text{O}_5$ , and  $\text{SnO}$  (abstract). Kuriyama et al. disclose a method for making a low-melting glass, comprising mixing various precursor substances and melting to form a glass material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the precursor substances from the sol-gel method of Yamada and the precursor substance from the acid base reaction method of Niida et al. in the teaching of Kuriyama to mix the precursor substances and subsequently melt the mixture in order to form a glass material with a low melting point.

### ***Response to Arguments***

4. Applicant's arguments filed April 17, 2007 have been fully considered but they are not persuasive. A rejection for claims 5 and 27 was not presented because it of its multiple dependencies as indicated in the first office action. Because the there was no

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merit to claims 5 and 27, a rejection could not be presented in the first office action. This is no indication that the claims are allowable, as clearly pointed out in the rejection above.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Queenie Dehghan whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 8:30am - 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Q Dehghan.

  
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